



Avalon, Santa Catalina.

OUR SEABOARD ISLANDS ON THE PACIFIC.

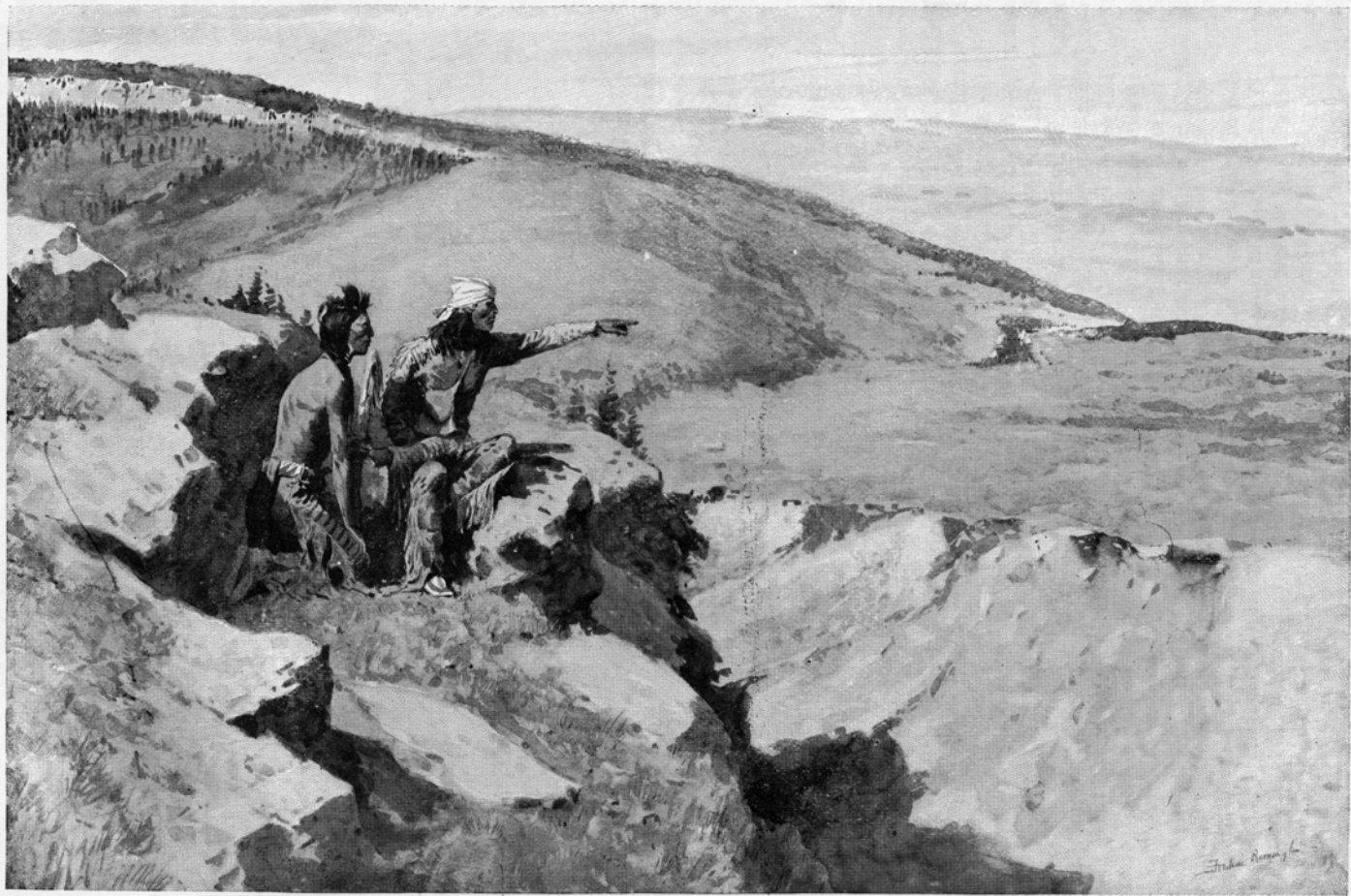
BY JOHN E. BENNETT.

THERE are upon the southwest extremity of the United States, and distributed along the coast for three hundred miles, from the latitude of San Francisco to that of San Diego, certain islands, nine in number and of various areas, about which neither geography nor history has much to say. These are the only seaboard islands on the Pacific belonging to the United States, if we do not consider those of Alaska, and those numerous tiny aits or eyots in the waters of the Sound country, nor the Hawaiian group. There are from the Golden Gate to the British line a few rock reefs or single cones sitting like black stacks here and there in the sea, and at greater or less distances from the bluff shores; but these have no claim to be spoken of as islands; that dignity belongs alone to those insular elevations in the ocean lying south

of the thirty-eighth parallel, and ending, for us, at the Mexican boundary.

Nature, however, taking no note of political division-lines, has not stopped at this point the southern trend of her island deposition, but she has carried them on across the line, along the mountainous coast of Lower California, where they are found under the names of San Marten, San Geronimo, Cerros, Los Lobos, and so on, to the equator.

None of these are large, and the entire aggregate area of the nine belonging to us does not exceed three hundred and fifty-one square miles, or less than two hundred and twenty-five thousand acres. Separately they grade in size from one hundred and seventy-six square miles, which is the area of Santa Catalina, to less than two square miles, which is that of both Santa Barbara and the lar-



"I SAIS: 'YOU GO DOWN DEES CANYON.'"

gest of the Farallones. The others, measured in square miles, are Santa Cruz, 115; Santa Rosa, 112; San Miguel, 183; San Clemente, 72; San Nicolas, 36; and Anacapa, 12. They lie in the arid region, at an average distance of thirty miles from the mainland, and they are uniform in their aspect of desolation. For the most part their surfaces present the characteristics of table-lands; some are rounded hummocks; but Santa Catalina is formed of two mountains, which pinch into sharp peaks three thousand feet high, and spread below them a jumble of ridges and ravines, the broken surface occasionally interrupted by small plateaus.

The Farallones group is a granitic dike, but the others are mostly lava. It is a heavy black basalt that lies massed in its hardened meltings, and shows a surface often of smooth rounded lumps or semi-spheroids, revealing the contracting effects of the extrusion of heat.

Sometimes along with the basalt there is country rock such as is found on the mainland. This rock has, by the action of the weather, become degraded, and often at the mouth of a canyon on the lee side of the island there is spread a pleasant level of land. It has been formed by the detritus borne down from the higher areas by the canyon's stream. This has been deposited here, and it has built up the ocean floor beside the roots of the island. As it arose, the sea was pushed back, until a little flat was made, and it stands there now covered with its scrub oak, its juniper, or its wild gray grass, and meets the water with a crescent shore, upon which the little wavelets softly lap as they rock in from the stilly bay.

But upon the

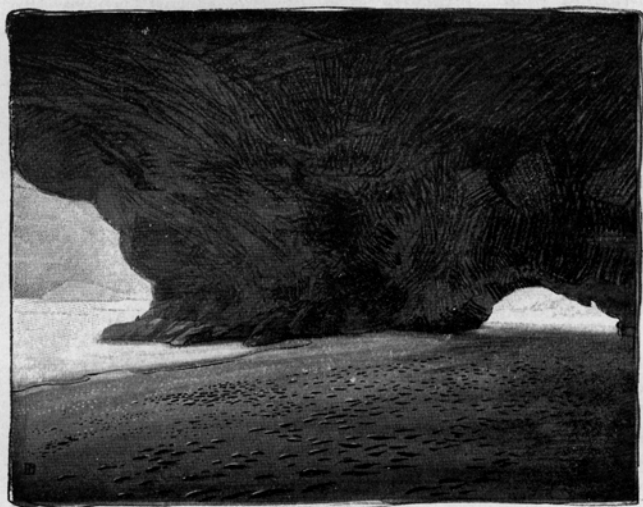
opposite side of the island, where the southwest winds, sweeping over the broad field of the Pacific, throw the blue waters against the black gaunt rocks, the wild elements war and play havoc. The white-frothed breakers roll and boom and burst, and the feathery spray is flung high against the scowling cliffs, until their face is varnished with a bath of spume.

And all along the cliffy coasts of these sea-girt islands there have been hewn by the waves' resistless action great caverns, with high arches above the entrances, and burrowed deeply by successive chambers into the bowels of the islands. Santa Cruz abounds with these wonders of marine erosion, the largest of which is Painted Cave. It is a succession of arches, the outermost the highest, the others grading down as depth in penetration is attained. Branching from either side of this range of compartments are other openings, so that a labyrinth of recesses appears. For fifteen hundred feet into the interior of the Painted Cave the light will enter, and there can be seen upon the walls and ceilings the infinite brilliant frescoes, red, green, yellow, and their blends, deposited by the oozing mineral waters from above.

On the lee side of the islands these grottos are floored with the stillest, softest, serenest waters. The sea about the



ON THE NORTH COAST OF SANTA CRUZ ISLAND.



THE TWO CAVES AT VAL DEZ HARBOR, SANTA CRUZ.

The larger opening affords the only landing-place from the harbor, and the smaller one the only way to the beach.

sheltered coasts is intensely blue and, when under the shade of a bluff or beneath the roof of a cave, where the calms allay the waters into glassy sheets, your boat will appear to be sitting upon the top of a nether world, which spreads with its innumerable population of fish and other life. Far down gardens of maidenhair, algæ, and sea-ferns are seen, curved or laced by paths of white sand, against which goldfish, the mackerel, sheep's-head and the yellowtail show their floating bodies in repose, or moving slowly with rhythmic motion of gills and tail. And over all that scene there is an atmosphere pellucid, balmy, soft as the cloudless azure which overhangs it, and the sea is a shimmering breast of sunshine. The breeze brushes your cheek like silken velvet, fans you into dreamy moods, or suffuses you with gentlest slumbers.

But on the weather side of the islands the water is rough, and this agitation of the surface impairs your vision into the abyss below; a tapestry of froth edges the line of shore, and the surging, ebullient billows drive in from the sea, plunge into the caves, explode, roar, and fill them with their fury.

But the results of the erosion of the sea at the base of these island rocks are not more curious than those of the rain and sun upon the cliffy faces of the lava.

The patient artists of nature have worked upon a surface scarified into strange devices by the contraction of the heated mass, and the wild scheme of embellishment has been accentuated and elaborated in remarkable details. What primarily were depressed lines have become deep gashes; smooth rounded bulges have been worn into jagged protuberances, sharp points, and keen hatchetlike blades of enormous size.

Much of this fantastic sculpturing strikingly resembles the effects of architecture. The castellated style predominates, and you

are impressed with the profusion of spires, turrets, and towers, and parapets edging the outline of the tops with merlons and crenelles. And then there are Byzantium domes and Grecian columns, the entire filigreed with the tracery of the arabesque.

And not alone have wave erosion and that of water from the clouds in their processes of island degradation wrought marvels in nature-carving, but the wearing action of the wind has been scarcely less effective. On San Nicolas, more perhaps than upon any other of the islands, is this phenomenon observable. Upon this island there is a singular subsidence, forming a canyon some hundreds of feet deep and half a mile across. It contains many little peaks of cerulean slate draped with vari-colored foliage and sitting upon a ground of white sand which has been blown thither by the winds. These winds at some seasons strike strongly over the islands, and effects of their exertions are everywhere presented. Now such is seen in a broad pebbly surface swept clean, the mosaics smoothly polished; again the feathery files have rasped the hard dark rocks, gouged them with emaciated hollows, oftentimes threatening the very security of their posture. The sharp fine particles give teeth to the blasts, and these gnaw at the structure of whatever interposes.

At the Farallones the erosive agents have worked with queer caprice. This rock being granite, has been acted upon by the sea at all levels, and throughout the long period when it has been rising out of the watery depths. Through a long narrow hole, slanting, and communicating with the ocean, there comes at intervals a terrific stream of air, forced by the spasmodic heaving of the waves against the lower orifice. The government, which uses this island for light-house purposes, enclosed the upper end with the nozzle of a fog-horn, and every few seconds there was blown an ear-splitting brawl, which was heard far out at sea and above the din of the breaking rollers. It was allowed to roar only in foggy weather, but it was eccentric in that it would only sound at high tide. When the tide was low, although the weather might be very thick, the thing was silent. For lack of its warning a ship went ashore upon the island rocks, and then it was that the government abandoned its location on the wind hole and erected a steam-siren, or mechanical



LOOKING INTO VAL DEZ HARBOR.

fog-horn, which has since very faithfully performed the necessary service.

Another singular perforation in this island rock is a passageway about two hundred feet long, intersected by several globose enlargements. One enters it on hands and knees, proceeds eighty feet, when it suddenly widens into a chamber about thirty feet in breadth and six or seven feet high. On the farther side the channel again contracts, proceeds, branches, becomes labyrinthine, and finally emerges to the surface in small unexplored holes. As though a ghastly circumstance was needed to make this boring grimly interesting, it is related that the first white person who entered this globular apartment found in it the skeleton of a woman. Her bones were delicate, and her teeth were freshly white. Who she was, how she came there, and for what reason, all this was sealed to the discoverer of her remains.



ON THE NORTH FARALLONES.



THE INTERIOR OF SANTA CATALINA ISLAND.

These were withdrawn into the open and interred beneath a cairn of stones.

There is but little vegetation upon the islands, and that much of the same character as is found upon the mainland. Santa Catalina, however, differing from the others in the numerous springs of fresh water—a circumstance which has been availed of to make it a resort—has considerable verdure and many groves of trees. Among these is the *Lyono thamnus*, a tree not found elsewhere than upon the islands. It has a stout branched trunk, and bears white blossoms in June. This island is also decorated with various charming and refreshing flowers—white lilacs, tree-poppies, and lavender, with ferns and lichens draping gloomy walls or weaving a carpet over the broken surface. Santa Cruz also has a good stream of water, which allows the growth of considerable vegetation.

But upon the other islands there is little else than a bleak desert, a waste of sand and cacti, the latter interspersed with blackthorn, the glistening fleshy ice-plant covering terraces and terraces of bluffs, which rise step by step to the plateaus above. A sparse growth of grass brought up by the winter rains heightens

the tawny aspect to a light faint green, but the immense herds of sheep with which all these places are populated soon eat this off back to the bare brown earth; or if it is not devoured while green, it dries into an ashy herbage—scant fodder for the hungry mouths.

These winter rains also supply the chief water sources of the islands. They are caught in holes in the rock surface called water-pots; in these the fluid collects, and for several months after the lapse of the humid season it may remain sufficiently fresh to be palatable; but after it stagnates or evaporates there is little of potable moisture accessible, and vegetation would soon perish were it not for the heavy fogs, which during three months of spring are so dense upon the islands and deposit such heavy dews as to amount almost to showers. On San Clemente there is a well from which a brackish liquid is pumped, and on the Farallones there is a mineral spring—pure water agreeably impregnated with iron and sulphur. But beyond this the water-supply is not material, and frequently, in periods of long drouths, with feed all consumed and water scarce, great sacrifices are made in sheep life by the

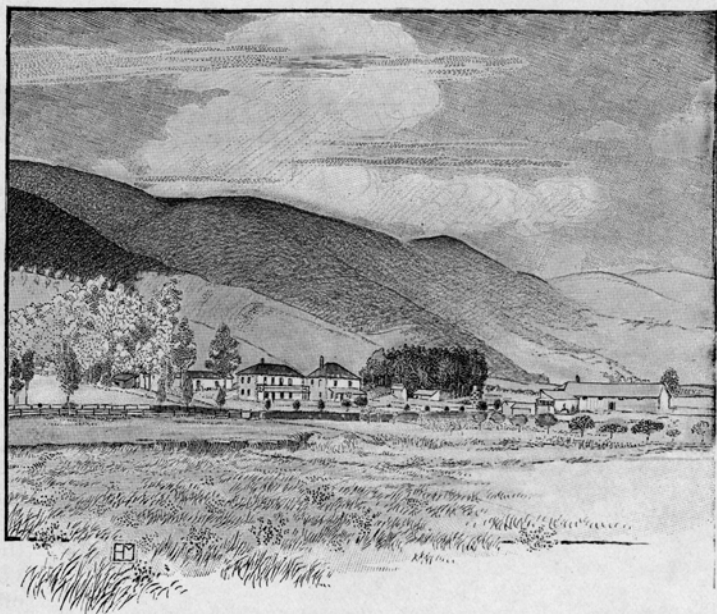
owners of these animals. There are in all perhaps sixty thousand sheep maintained upon the islands, and the number has a constant tendency to increase in excess of the possible food-supply. When such a condition is conceived to have been reached, a flat of wholesale execution goes out, and then it is that *matanzas*, or great abattoirs, are erected, in which thousands of sheep are killed merely for their pelts, tallow, and glue. In 1875, on Santa Cruz Island, twelve thousand were thus slaughtered, and in 1887 twenty-five thousand were in like summary manner taken off.

The few persons who herd these sheep comprise the populations of the islands. An exception to this is presented by Santa Catalina, which, being a resort, has several thousand inhabitants, gathered principally into its village, Avalon. The owners of the islands are the proprietors of the sheep. In the early fifties, when these lands were taken possession of, in some instances by the parties who now own them, they were stocked with about two hundred sheep apiece. Fenced in by their fluid barrier, there was no possibility of the animals' escaping, and small danger of the preserves ever being invaded by thieves. The stock was left to their own shift, and their owners concerned themselves with other affairs in divers parts of California. But soon the sheep had so multiplied that the island principalities came to be veritable El Dorados. Thousands of dollars of annual income were derived from them, and are to-day, though when first seized upon the islands were covered with heavy growths of rich grasses, which had accumulated upon them through successive years

of unmolestation, and which it took even a large number of animals a long time to eat off, and the areas would then support larger flocks than now. In those days, too, which were the early period of California's settlement, the prices of wool and mutton were much in excess of present quotations; so that a very few years of the earlier returns which these gentlemen acquired through their island estates made them comfortably rich.

Of animals *feræ naturæ* upon these islands there are several species—wild hogs on Santa Cruz and Santa Rosa, wild goats on Santa Catalina and San Clemente. Both of these were placed there by whites, though the year of their introduction is not known. Originally domestic, they have returned to a state of nature through neglect. Rats and mice are also upon the islands, having been cast thither by vessels wrecked upon their rocks; there are also a small red fox and a skunk, which are indigenous mammals; but there are neither serpents, frogs, nor poisonous insects, these noxious things never having been transported thither.

The tourist exploring the interior of the island caves will experience an unpleasant shock when, after proceeding far into the grotto, he discovers that the



SANTA CRUZ ISLAND—THE MAIN RANCH.

place has inhabitants; and the splash, panic, and roar which follow tell him that the occupants are sea-lions. Quickly he must needs speed out, for they will plunge straight toward him, dive under him, and he must be wary, else they will upset his boat, and once he is in the water they will attack him, with possibly fatal results.

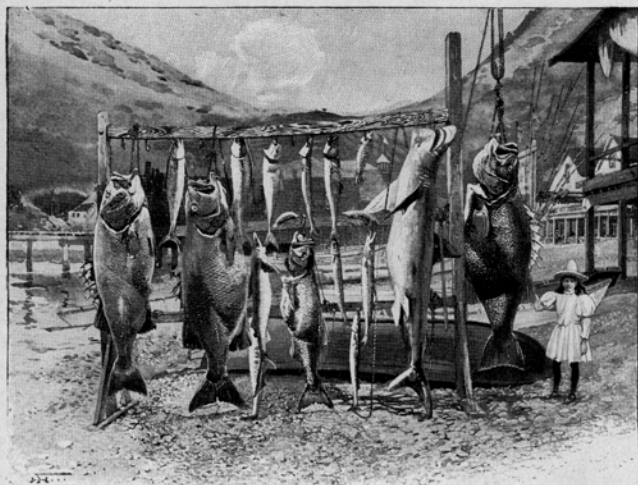
Sea-lions are abundant about all of the islands. At Anacapa there is an enormous kelp-bed, where they breed and have their metropolis. These carnivora are not fur-bearing, but are covered with hair which grows upon a thick, unelastic hide. The hide has few uses, and the flesh is not palatable, though Indians find many services for the former, and the latter has furnished innumerable meals to both whites and natives. About Anacapa, too, there is a variety of shell-fish, the most notable of which is the haliotis, or abalone. It is a univalve, which seizes hold of a rock with its strong, muscular foot, and floats idly upward upon the surface, its broad scooped shell shielding its body like a dark umbrella. When disturbed it will suddenly contract, collapse, and its shell will be drawn over the body tightly against the rock. These abalone are much sought, and their fisheries sustain a numerous population of Italians and Chinese. The shell is iridescent, the nacre being variegated blue and green or pink and white; they are

exported to London, where they are worked up into mother-of-pearl of commerce, and so employed in the manufacture of buttons and ornaments. The flesh of the animal is dried, and becomes a hard, soap-colored ball as large as a woman's fist. It is sent to China, where it is used as food. The shells bring \$30 per ton, while \$90 is paid for a like quantity of the desiccated meat.

Upon San Nicolas, the farthest seaward of the islands, lying about sixty miles off shore, there are innumerable remnants of an aboriginal population. Evidences appear upon all the islands of their having been the abode of a race of people who have passed; but at San Nicolas appear all the specimens that are found elsewhere, and many that have not been duplicated by any other spot. Immense mounds of abalone shells, some half an acre in extent, are among these curiosities, revealing the sites of periodic feasts of the islanders upon this fish. Among these piles are scattered the shells of the limpet, mya, mussel, and other mollusks, while stone mortars and pestles, implements of bone and ornaments of teeth, are both numerous and curious.

On a knoll two miles from the island beach is an Indian burial-ground. A dozen or more grim skeletons with their whitened skulls lie upon the shore, denuded of the sand in which they were once interred. The wild winds have

swept it away, and the rains and fogs and the bleaching suns have been striving to dissolve and eradicate them, but they still remain. Some of the skulls show evidences of the tragic manner in which their owners met their deaths. The Innuits, it is said, coming down from the Alaskan archipelagoes, fell upon these harmless children of the south, massacred the men, and after a little while abandoned the women and the young, and carried off all they could steal. This was long after 1542, when Ca-



ONE DAY'S CATCH.

Jew-fish, a shark and small fry.



SHEEP-SHEARING.

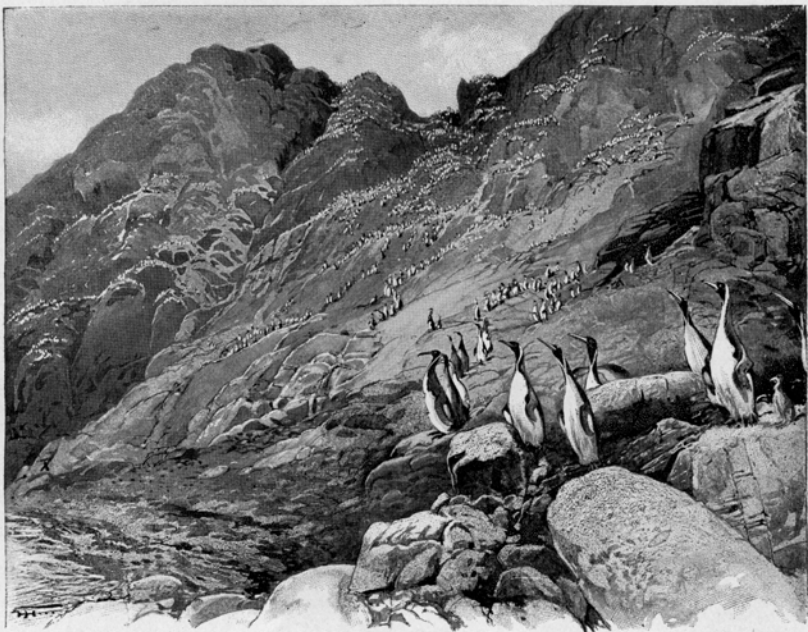
brillo, the Spanish navigator, visited the islands, and found them tenanted by a mild and vigorous people, who, revelling in the soft ether of their climate, found their sustenance in the plenitudinous spontaneity of nature.

After the invasion of the Innuits and their departure, those who remained managed to maintain themselves until 1835, when the Franciscan friars went to the islands, and gathering them all into boats, took them to the mainland, where they were mingled with the neophytes of the missions. It is related that after the last boat had pushed off from San Nicolas a woman screamed for her child, which, in the excitement of the movement aboard the transports, she had forgotten. She jumped out of the vessel and sped away to seek it. The boat continued its passage, and the woman was left to her fate. The baby died, but the lone and miserable creature remained the solitary inhabitant of the place for many years. In her old age she was rescued and brought to Santa Barbara, where she died soon after her arrival.

Of all the several islands the Faral-

lones are the most remarkable, for the fact that they comprise the rookeries of vast numbers of sea-fowl, which assemble there and breed. These lie opposite the bay of San Francisco, and they are used by the government for a light-house station. The maintenance of this requires the residence upon the island of a small colony of persons who in the service of the government consent thus to banish themselves from society. The light-house steamer visits them every three months, then restocks their larder. Aside from this their only communication with civilization is by an occasional tug which may stop there to allow its captain to spy abroad from the light-house tower for incoming craft. Sometimes such a landing is not possible, owing to the height of the sea, and weeks may pass before the waters will subside so such can be effected.

At nearly all times a strong cool wind prevails, and often in the afternoon it is sifted through with fog. A high board fence has been erected to protect the vegetation in the tiny patch of the light-house-tender's garden from being uprooted by



THE GREAT MURRE ROOKERY, SOUTH FARALLONES.

the wind. But even with that, plant life does not thrive—or rather it thrives excessively, so that foliage becomes rank, and the fruit is a failure through growing too fast. Cabbages spring up, rush quickly into an abundance of green heavy leaves, but will not “bulb” or “tuber.” The cause of this is the strong guano soil in which the plants are grown; and the guano is deposited by the wild sea-fowl, which infest all the Farallones, three in number, making of them, in the opinion of ornithologists, the greatest bird islands in the world.

There are eight varieties of these birds. They are the guillemot, commonly called the murre, the gull, the auk or auklet, the sea-pigeon, the shag or cormorant, the ashy petrel, the tufted puffin or sea-parrot, and the rock-wren. The first of these, the murre, dominates in number and importance upon the island. It is a kind of duck, with a black head, white breast, and bluish back, and sits upright like a penguin. Its food is vegetable, dissection never having revealed the presence of fish. Its eggs are valuable for

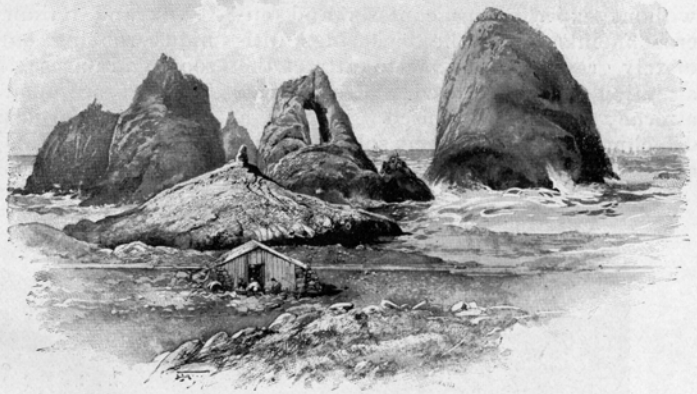
food, and until recently and for many years they were extensively gathered and sold in the San Francisco market, about fifteen thousand dozen yearly being disposed of there, purchased mainly by restaurants and boarding-houses, at an average price of twenty-five cents per dozen. The egg is about twice the size of that of a hen, is white or bluish-green, and flecked with brown. When fresh it is indistinguishable from the hen product, but it soon develops a fishy taste. The murre lays one egg upon a nest of roots or grass, and proceeds to incubate the next generation. At night, when she is off duty, the male succeeds her. If unmolested, the nest will thus be covered until the young is hatched, when it will be guarded for a few weeks, then escorted off into the indefinite distance of the sea.

But if the murre is disturbed by an egg-hunter and its single egg taken, it will return and replace its successively stolen ovum until eight have been laid. It is loath to leave its nest even when the despoiler approaches, and when he comes up she leans away from him and moves over to the far side of the nest. But presently, yielding to the alarm within her

breast, she emits a sudden squawk and flies off, flushing the entire rookery as she moves toward the sea, leaving the pickers to fill their pouched shirts with the booty. They must hurry the work, for as soon as the eggs are uncovered the gulls hover close and become thick upon the scene. These the men must fight off, for they brazenly interpose themselves and battle with the humans for the possession of the eggs.

The opportunity being open, the gull sweeps down upon the murre egg, seizes it in its mouth and goes sailing aloft; cracks it in its bill and gobbles what of its contents it can, the residue falling on the rocks below; then it takes another swoop away and balances itself to spy out a new egg.

The gull's egg also is palatable. It is slightly smaller than that of the murre, whitish and speckled, three eggs being a litter. The eggs of the other birds are worthless for human uses, but their nests are raided by gulls and by each other. The albuminous fluid of the



AN EGG-PICKER'S CABIN.

cormorant egg will not coagulate, and the puffin's egg has a repulsive fishy flavor. This bird has black plumage, with red beak and feet, while the cormorant is a large light blue bird, and flies in pairs. The sea-pigeon is dark slate with some white in its wings; it has red feet, and lays a light blue egg. The auk is as large as a pigeon, and is nocturnal in its habits. The petrel has a musky smell, by the odor of which its nest is easily traceable.

The murrens make their nests high up, and often in the open, but the others hide theirs in the crevices of the rocks. Their note is loud, shrill, not pleasing to the ear; all except the cheery little rock-wren, whose liquid warble is a sweet, harmonious solo in the concert of shrieks and screams which ascend from the thousands of feathered throats.

That these islands were a great repository of edible eggs became known in the early fifties. At the time of the discovery of this fact provisions were scarce and gold was plentiful in San Francisco, and the rookery eggs offered in the markets of that city brought one dollar a dozen. The opening of this new and free opportunity to acquire wealth precipitated numbers of people upon the islands and in the business of egg-gathering. Quarrels ensued



A GULL'S NEST.

between the competitors as to their respective "rights" in the premises, with the result that a company was formed among a number of the pickers, which bought out the claims of the others. This company managed to hold on to its advantages for some years, not, however, without experiencing contests and encroachments, until the bickerings ultimately grew so fierce as to attract the attention of the United States district attorney at San Francisco. He sent a detachment of government soldiers there and deported every egg-picker.

Following this the murre and gulls were permitted for a season to lay and hatch in safety; but later, the government revealing no desire for revenue from the eggs, those on the island allowed them to be picked on shares. This introduced a company of about eighteen Greek and Italian egg-pickers into the nidus-robbing enterprise; but disputes soon again arose, and ultimately to re-establish peace upon the islands it became necessary to forbid permanently any traffic in the eggs. This has accordingly been done by a recent order from Washington.

A Handful of the Flock, Santa Cruz Island.

